October 12, 2012

Duke Energy
Miami Fort Generating Station
11021 Brower Road
North Bend, OH 45052

Attention: Ms. Tara Thomas
Environmental Coordinator

Re: Results – **September 2012**
Low-Level Mercury Sampling
Miami Fort Generating Station
North Bend, Ohio

In accordance with your request, URS prepared the following letter report transmitting low-level mercury test results for samples collected at the Miami Fort Generating Station located in North Bend, Ohio.

The scope of work involved the sampling of intake and discharge waters from the following sources and analysis of those samples for low-level mercury.

1. River Intake
2. Station 601 (WWT Influent)
   [Samples were collected at this station one detention time (approximately 14 hours as specified by Duke Energy) before samples collected at Outfall 608]
3. Outfall 608 (WWT Effluent)
   [Samples were collected at this outfall one detention time (approximately 14 hours as specified by Duke Energy) after samples collected at station 601]
4. Outfall 002 (Pond B Discharge)

Each sample was collected following the required Method 1669: *Sampling Ambient Water for Determination of Trace Metals at EPA Water Quality Criteria Levels* (Sampling Method) and analyzed by Method 1631. At the request of Duke Energy, a dissolved low-level mercury sample was collected by Method 1669 from Outfall 608 and analyzed by Method 1631. The collected dissolved sample was filtered at the laboratory utilizing 0.45 micron filtration. Also at the request of Duke Energy, total metal mercury sample aliquots (preserved) from Station 601 (Unit 7 and 8) were used to have the laboratory pipet off and prepare the supernatant layer of the samples (leaving behind as much of the settled solids as possible) for analysis by Method 7470A.

Field staff from URS' Cincinnati office conducted the sampling and TestAmerica Laboratories Inc. located in North Canton, Ohio performed the analytical procedures. The analytical procedures included the analyses of a collected sample and duplicate sample

URS Corporation
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202
Tel: 513.651.3440
Fax: 1.877.660.7720 (toll free)

(duplicates collected at Outfall 608 and Outfall 002), field blank (field blanks collected at the River Intake, Outfall 608, and Outfall 002), and trip blank.

The results from the **September 4 and 5, and September 30, 2012** sampling events are presented in the attached Table 1. A copy of the laboratory report is enclosed with this letter.

--ooOoo--

URS is pleased to provide continued assistance to Duke Energy in the execution of their environmental monitoring requirements. If there are any questions regarding the content of this report, please do not hesitate to contact the undersigned.

Sincerely,

URS Corporation

Michael A. Wagner
Project Manager

Dennis P. Connair, C.P.G.
Principal

MAW/DPC/Duke Energy-MFS LL Hg 2012
Job No. 14950516

TABLE 1

ANALYTICAL RESULTS
LOW-LEVEL MERCURY
RIVER INTAKE, STATION 601, OUTFALL 608, AND OUTFALL 002 (POND B)

DUKE ENERGY - MIAMI FORT STATION
NORTH BEND, OHIO

Sample ID	Date Sampled / Results (ng/L, parts per trillion)					
	1/3-4/2012	2/2-3/2012	3/1-2/2012	4/2-3/2012	5/1-2/2012	6/5-6/2012
River Intake	7.9	6.1	3.9	4.0	3.9	2.2
Station 601 (7)	360,000	100,000	1,300,000	85,000	590,000	180,000
Station 601 (7)*	570	6,000	54,000	68,000	110,000	670
Station 601 (7)* [duplicate]	200	Not Collected	55,000	66,000	110,000	Not Collected
Station 601 (8)	210,000	68,000	830,000	310,000	Off Line	140,000
Station 601 (8)*	420	5,300	110,000	75,000	Off Line	1,000
Station 601 (8)*[duplicate]	Not Collected	3,500	Not Collected	Not Collected	Off Line	880
Outfall 608	60	89	48	120	170	210
Outfall 608 [duplicate]	65	85	49	120	200	200
Outfall 608 [dissolved, 0.45 micron]	2.9	26	1.6 H	0.53 B	61	64
APB-002	3.2	3.7	2.9	4.8	4.2	2.7
APB-002 [duplicate]	3.3	3.5	3.6	4.6	4.0	2.5
Field Blank (RI-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Field Blank (WWT-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Field Blank (AP-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trip Blank	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Samples collected by URS. Samples analyzed by TestAmerica of North Canton, Ohio.
Sampling times are noted within the associated laboratory report for each collected sample
* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]. The aqueous layer of the sample was pipetted off and prepared, with care to leave behind as much of the settled solids as possible.
H = Sample was prepped or analyzed beyond the specified holding time B = Compound was found in blank and sample

TABLE 1 (continued)

Sample ID	Date Sampled / Results (ng/L, parts per trillion)					
	7/5-6/2012	8/1-2/2012	9/4-5/2012	10/x/2012	11/x/2012	12/x/2012
River Intake	1.6	1.6	1.1			
Station 601 (7)	240,000	360,000	230,000			
Station 601 (7)*	8,100 B	1,200	2,000			
Station 601 (7)* [duplicate]	6,400 B	890	Not Collected			
Station 601 (8)	460,000	260,000	320,000			
Station 601 (8)*	10,000 B	<200	670			
Station 601 (8)*[duplicate]	Not Collected	Not Collected	380			
Outfall 608	240	78	9.5 / 49**			
Outfall 608 [duplicate]	220	82	10 / 46**			
Outfall 608 [dissolved, 0.45 micron]	29 H	19	7.5			
APB-002	2.5	2.1	3.8			
APB-002 [duplicate]	2.5	2.0	4.1			
Field Blank (RI-FB)	<0.50	<0.50	1.2			
Field Blank (WWT-FB)	<0.50	<0.50	<0.50 / <0.50**			
Field Blank (AP-FB)	<0.50	<0.50	<0.50			
Trip Blank	<0.50	<0.50	<0.50 / <0.50**			

Samples collected by URS
Sampling times are noted within the associated laboratory report for each collected sample.
Samples analyzed by TestAmerica of North Canton, Ohio
* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]. The aqueous layer of the sample was pipetted off and prepared, with care to leave behind as much of the settled solids as possible.
** = Outfall 608 re-sampled 9/30/2012 at request of Duke Energy. B = Compound was found in blank and sample

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-14830-1
Client Project/Site: Miami Fort 2012 LL Hg - J12090116

For:
Duke Energy Corporation
139 East Fourth Street
Cincinnati, Ohio 45202

Attn: Ms. Sue Wallace

Denise Pohl

Authorized for release by:
9/28/2012 1:09:36 PM

Denise Pohl
Project Manager II
denise.pohl@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-14830-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Duke Energy Corporation

Project: Miami Fort 2012 LL Hg - J12090116

Report Number: 240-14830-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 09/06/2012; the samples arrived in good condition. The temperature of the coolers at receipt was 23.0 C.

DISSOLVED LOW LEVEL MERCURY

Sample 608 WWT DISS (240-14830-9) was analyzed for dissolved low level mercury in accordance with EPA Method 1631E. The samples were prepared on 09/08/2012 and analyzed on 09/27/2012.

No difficulties were encountered during the Low Level Mercury analysis.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples 601 (8) WWT TOT (240-14830-2), 601 (8) WWT TOT DUP (240-14830-3) and 601 (7) WWT TOT (240-14830-5) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/10/2012 and analyzed on 09/11/2012.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.

Job ID: 240-14830-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

LOW LEVEL MERCURY

Samples 601 (8) WWT (240-14830-1), 601 (7) WWT (240-14830-4), 608 WWT FB (240-14830-6), 608 WWT (240-14830-7), 608 WWT DUP (240-14830-8), RI FB (240-14830-10), RI (240-14830-11), OUTFALL 002 FB (240-14830-12), OUTFALL 002 (240-14830-13), OUTFALL 002 DUP (240-14830-14) and TRIP BLANK (240-14830-15) were analyzed for Low Level Mercury in accordance with EPA Method 1631E. The samples were prepared on 09/08/2012 and analyzed on 09/18/2012 and 09/27/2012.

Samples 601 (8) WWT (240-14830-1)[100000X] and 601 (7) WWT (240-14830-4)[100000X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Low Level Mercury analyses.

All quality control parameters were within the acceptance limits.

Method Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-14830-1	601 (8) WWT	Water	09/04/12 17:00	09/06/12 08:45
240-14830-2	601 (8) WWT TOT	Water	09/04/12 17:05	09/06/12 08:45
240-14830-3	601 (8) WWT TOT DUP	Water	09/04/12 17:10	09/06/12 08:45
240-14830-4	601 (7) WWT	Water	09/04/12 17:15	09/06/12 08:45
240-14830-5	601 (7) WWT TOT	Water	09/04/12 17:20	09/06/12 08:45
240-14830-6	608 WWT FB	Water	09/05/12 08:10	09/06/12 08:45
240-14830-7	608 WWT	Water	09/05/12 08:15	09/06/12 08:45
240-14830-8	608 WWT DUP	Water	09/05/12 08:20	09/06/12 08:45
240-14830-9	608 WWT DISS	Water	09/05/12 08:25	09/06/12 08:45
240-14830-10	RI FB	Water	09/05/12 08:30	09/06/12 08:45
240-14830-11	RI	Water	09/05/12 08:35	09/06/12 08:45
240-14830-12	OUTFALL 002 FB	Water	09/05/12 08:55	09/06/12 08:45
240-14830-13	OUTFALL 002	Water	09/05/12 09:00	09/06/12 08:45
240-14830-14	OUTFALL 002 DUP	Water	09/05/12 09:05	09/06/12 08:45
240-14830-15	TRIP BLANK	Water	09/05/12 00:00	09/06/12 08:45

Detection Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (8) WWT — Lab Sample ID: 240-14830-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	320000		50000		ng/L	100000		1631E	Total/NA

Client Sample ID: 601 (8) WWT TOT — Lab Sample ID: 240-14830-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	0.67		0.20		ug/L	1		7470A	Total/NA

Client Sample ID: 601 (8) WWT TOT DUP — Lab Sample ID: 240-14830-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	0.38		0.20		ug/L	1		7470A	Total/NA

Client Sample ID: 601 (7) WWT — Lab Sample ID: 240-14830-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	230000		50000		ng/L	100000		1631E	Total/NA

Client Sample ID: 601 (7) WWT TOT — Lab Sample ID: 240-14830-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	2.0		0.20		ug/L	1		7470A	Total/NA

Client Sample ID: 608 WWT FB — Lab Sample ID: 240-14830-6

No Detections

Client Sample ID: 608 WWT — Lab Sample ID: 240-14830-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	9.5		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: 608 WWT DUP — Lab Sample ID: 240-14830-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	10		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: 608 WWT DISS — Lab Sample ID: 240-14830-9

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	7.5		0.50		ng/L	1		1631E	Dissolved

Client Sample ID: RI FB — Lab Sample ID: 240-14830-10

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	1.2		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: RI — Lab Sample ID: 240-14830-11

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	1.1		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: OUTFALL 002 FB — Lab Sample ID: 240-14830-12

No Detections

Detection Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: OUTFALL 002 — Lab Sample ID: 240-14830-13

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	3.8		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: OUTFALL 002 DUP — Lab Sample ID: 240-14830-14

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	4.1		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-14830-15

No Detections

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (8) WWT
Date Collected: 09/04/12 17:00
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-1
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	320000		50000		ng/L		09/08/12 14:50	09/18/12 14:47	100000

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (8) WWT TOT
Date Collected: 09/04/12 17:05
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-2
Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.67		0.20		ug/L		09/10/12 12:15	09/11/12 08:10	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (8) WWT TOT DUP
Date Collected: 09/04/12 17:10
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-3
Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.38		0.20		ug/L		09/10/12 12:15	09/11/12 08:11	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (7) WWT
Date Collected: 09/04/12 17:15
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-4
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	230000		50000		ng/L		09/08/12 14:50	09/18/12 14:56	100000

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (7) WWT TOT
Date Collected: 09/04/12 17:20
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-5
Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0		0.20		ug/L		09/10/12 12:15	09/11/12 08:13	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 608 WWT FB
Date Collected: 09/05/12 08:10
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-6
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		09/08/12 14:50	09/18/12 07:52	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 608 WWT
Date Collected: 09/05/12 08:15
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-7
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.5		0.50		ng/L		09/08/12 14:50	09/18/12 15:08	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 608 WWT DUP
Date Collected: 09/05/12 08:20
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-8
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	10		0.50		ng/L		09/08/12 14:50	09/18/12 15:11	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 608 WWT DISS
Date Collected: 09/05/12 08:25
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-9
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	7.5		0.50		ng/L		09/08/12 14:50	09/27/12 08:34	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: RI FB
Date Collected: 09/05/12 08:30
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-10
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.2		0.50		ng/L		09/08/12 14:50	09/18/12 07:56	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: RI
Date Collected: 09/05/12 08:35
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-11
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.1		0.50		ng/L		09/08/12 14:50	09/27/12 08:43	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: OUTFALL 002 FB
Date Collected: 09/05/12 08:55
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-12
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		09/08/12 14:50	09/18/12 08:00	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: OUTFALL 002
Date Collected: 09/05/12 09:00
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-13
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.8		0.50		ng/L		09/08/12 14:50	09/27/12 08:52	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: OUTFALL 002 DUP
Date Collected: 09/05/12 09:05
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-14
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.1		0.50		ng/L		09/08/12 14:50	09/27/12 09:00	1

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: TRIP BLANK
Date Collected: 09/05/12 00:00
Date Received: 09/06/12 08:45

Lab Sample ID: 240-14830-15
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		09/08/12 14:50	09/18/12 08:03	1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 240-57172/1-A
Matrix: Water
Analysis Batch: 58075

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57172

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		09/08/12 14:50	09/14/12 11:57	1

Lab Sample ID: LCS 240-57172/2-A
Matrix: Water
Analysis Batch: 58075

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57172

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			5.00	4.46		ng/L		89	77 - 123		

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-57240/1-A
Matrix: Water
Analysis Batch: 57373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57240

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20		ug/L		09/10/12 12:15	09/11/12 07:53	1

Lab Sample ID: LCS 240-57240/2-A
Matrix: Water
Analysis Batch: 57373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57240

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			5.00	5.03		ug/L		101	81 - 123		

Metals

Prep Batch: 57172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14830-1	601 (8) WWT	Total/NA	Water	1631E	
240-14830-4	601 (7) WWT	Total/NA	Water	1631E	
240-14830-6	608 WWT FB	Total/NA	Water	1631E	
240-14830-7	608 WWT	Total/NA	Water	1631E	
240-14830-8	608 WWT DUP	Total/NA	Water	1631E	
240-14830-9	608 WWT DISS	Dissolved	Water	1631E	
240-14830-10	RI FB	Total/NA	Water	1631E	
240-14830-11	RI	Total/NA	Water	1631E	
240-14830-12	OUTFALL 002 FB	Total/NA	Water	1631E	
240-14830-13	OUTFALL 002	Total/NA	Water	1631E	
240-14830-14	OUTFALL 002 DUP	Total/NA	Water	1631E	
240-14830-15	TRIP BLANK	Total/NA	Water	1631E	
LCS 240-57172/2-A	Lab Control Sample	Total/NA	Water	1631E	
MB 240-57172/1-A	Method Blank	Total/NA	Water	1631E	

Prep Batch: 57240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14830-2	601 (8) WWT TOT	Total/NA	Water	7470A	
240-14830-3	601 (8) WWT TOT DUP	Total/NA	Water	7470A	
240-14830-5	601 (7) WWT TOT	Total/NA	Water	7470A	
LCS 240-57240/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-57240/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 57373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14830-2	601 (8) WWT TOT	Total/NA	Water	7470A	57240
240-14830-3	601 (8) WWT TOT DUP	Total/NA	Water	7470A	57240
240-14830-5	601 (7) WWT TOT	Total/NA	Water	7470A	57240
LCS 240-57240/2-A	Lab Control Sample	Total/NA	Water	7470A	57240
MB 240-57240/1-A	Method Blank	Total/NA	Water	7470A	57240

Analysis Batch: 58075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-57172/2-A	Lab Control Sample	Total/NA	Water	1631E	57172
MB 240-57172/1-A	Method Blank	Total/NA	Water	1631E	57172

Analysis Batch: 58475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14830-1	601 (8) WWT	Total/NA	Water	1631E	57172
240-14830-4	601 (7) WWT	Total/NA	Water	1631E	57172
240-14830-6	608 WWT FB	Total/NA	Water	1631E	57172
240-14830-7	608 WWT	Total/NA	Water	1631E	57172
240-14830-8	608 WWT DUP	Total/NA	Water	1631E	57172
240-14830-10	RI FB	Total/NA	Water	1631E	57172
240-14830-12	OUTFALL 002 FB	Total/NA	Water	1631E	57172
240-14830-15	TRIP BLANK	Total/NA	Water	1631E	57172

Analysis Batch: 59370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14830-9	608 WWT DISS	Dissolved	Water	1631E	57172
240-14830-11	RI	Total/NA	Water	1631E	57172
240-14830-13	OUTFALL 002	Total/NA	Water	1631E	57172

Metals (Continued)

Analysis Batch: 59370 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-14830-14	OUTFALL 002 DUP	Total/NA	Water	1631E	57172

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 601 (8) WWT
Lab Sample ID: 240-14830-1
Date Collected: 09/04/12 17:00
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		100000	58475	09/18/12 14:47	AS	TAL NC

Client Sample ID: 601 (8) WWT TOT
Lab Sample ID: 240-14830-2
Date Collected: 09/04/12 17:05
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			57240	09/10/12 12:15	LM	TAL NC
Total/NA	Analysis	7470A		1	57373	09/11/12 08:10	BD	TAL NC

Client Sample ID: 601 (8) WWT TOT DUP
Lab Sample ID: 240-14830-3
Date Collected: 09/04/12 17:10
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			57240	09/10/12 12:15	LM	TAL NC
Total/NA	Analysis	7470A		1	57373	09/11/12 08:11	BD	TAL NC

Client Sample ID: 601 (7) WWT
Lab Sample ID: 240-14830-4
Date Collected: 09/04/12 17:15
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		100000	58475	09/18/12 14:56	AS	TAL NC

Client Sample ID: 601 (7) WWT TOT
Lab Sample ID: 240-14830-5
Date Collected: 09/04/12 17:20
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			57240	09/10/12 12:15	LM	TAL NC
Total/NA	Analysis	7470A		1	57373	09/11/12 08:13	BD	TAL NC

Client Sample ID: 608 WWT FB
Lab Sample ID: 240-14830-6
Date Collected: 09/05/12 08:10
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	58475	09/18/12 07:52	AS	TAL NC

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: 608 WWT

Lab Sample ID: 240-14830-7

Date Collected: 09/05/12 08:15
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	58475	09/18/12 15:08	AS	TAL NC

Client Sample ID: 608 WWT DUP

Lab Sample ID: 240-14830-8

Date Collected: 09/05/12 08:20
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	58475	09/18/12 15:11	AS	TAL NC

Client Sample ID: 608 WWT DISS

Lab Sample ID: 240-14830-9

Date Collected: 09/05/12 08:25
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Dissolved	Analysis	1631E		1	59370	09/27/12 08:34	AS	TAL NC

Client Sample ID: RI FB

Lab Sample ID: 240-14830-10

Date Collected: 09/05/12 08:30
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	58475	09/18/12 07:56	AS	TAL NC

Client Sample ID: RI

Lab Sample ID: 240-14830-11

Date Collected: 09/05/12 08:35
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	59370	09/27/12 08:43	AS	TAL NC

Client Sample ID: OUTFALL 002 FB

Lab Sample ID: 240-14830-12

Date Collected: 09/05/12 08:55
Matrix: Water
Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	58475	09/18/12 08:00	AS	TAL NC

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Client Sample ID: OUTFALL 002

Lab Sample ID: 240-14830-13

Date Collected: 09/05/12 09:00

Matrix: Water

Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	59370	09/27/12 08:52	AS	TAL NC

Client Sample ID: OUTFALL 002 DUP

Lab Sample ID: 240-14830-14

Date Collected: 09/05/12 09:05

Matrix: Water

Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	59370	09/27/12 09:00	AS	TAL NC

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-14830-15

Date Collected: 09/05/12 00:00

Matrix: Water

Date Received: 09/06/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			57172	09/08/12 14:50	AS	TAL NC
Total/NA	Analysis	1631E		1	58475	09/18/12 08:03	AS	TAL NC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort 2012 LL Hg - J12090116

TestAmerica Job ID: 240-14830-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAC	9	01144CA	06-30-13
Connecticut	State Program	1	PH-0590	12-31-13
Florida	NELAC	4	E87225	06-30-13
Georgia	State Program	4	N/A	06-30-13
Illinois	NELAC	5	200004	07-31-13
Kansas	NELAC	7	E-10336	01-31-13
Kentucky	State Program	4	58	11-16-12
L-A-B	DoD ELAP		L2315	02-28-13
Minnesota	NELAC	5	039-999-348	12-31-12
Nevada	State Program	9	OH-000482008A	07-31-12
New Jersey	NELAC	2	OH001	06-30-13
New York	NELAC	2	10975	04-01-13
Ohio VAP	State Program	5	CL0024	01-19-14
USDA	Federal		P330-11-00328	08-26-14
Virginia	NELAC	3	460175	09-14-13
Washington	State Program	10	C971	01-12-13
West Virginia DEP	State Program	3	210	12-31-12

Chain of Custody Record

NORTH CANTON

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: DUKE ENERGY	Client Project Manager: M. WAGNER (URS)	Site Contact: ~~T. PAT~~ T. THOMAS	Lab Contact:	COC No: 044778
Address: MIAMI FORT STATION	Telephone: 513-651-3440	Telephone: 513 467-4950	Telephone:	1 of 2 COCs
City/State/Zip: N. BEND, OH.	Email: mike.wagner@urs.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 513 467-4900		TAT if different from Below: CONTRACT		Walk-in client: ☐
Project Name: DUKE MF 2012 LLHg	Method of Shipment/Carrier:	☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Lab pickup: ☐
Project Number: 1A950516	Shipping/Tracking No:			Lab sampling: ☐
PO#				Job/SDG No:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite=C / Grab=G	LLHg	TOTAL Hg	Sample Specific Notes / Special Instructions:
601 (8) WWT *	9-4-12	1700		X									4		N	G	X		
601 (8) WWT TOT		1705		X					1									X	
601 (8) WWT TOT DUP		1710		X					1									X	
601 (7) WWT *		1715		X									4				X		
601 (7) WWT TOT		1720		X					1									X	
608 WWT FB	9-5-12	0810		X									2				X		
608 WWT		0815		X									4				X		
608 WWT DUP		0820		X									4				X		
608 WWT DISS		0825		X									4				X		
RI FB		0830		X									2				X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

* POTENTIALLY ELEVATED Hg

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	~~9-5-12 1510~~	9/5/12 1515	AJA/COURIER		9/5/12 1515
Relinquished by: AJA/COURIER	Company:	Date/Time: 9/5/12 1515	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA	Date/Time: 9-6-12 845

TAL 0018- 1 (04/10)

Chain of Custody Record

NORTH CANTON

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: ______

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other ______

TestAmerica Laboratories, Inc.

Client Contact

Company Name: DUKE ENERGY

Address: MIAMI FORT STATION

City/State/Zip:

Phone:

Project Name:

Project Number: 14950516

PO#

Client Project Manager: See Page

Telephone:

Email:

Method of Shipment/Carrier:

Shipping/Tracking No:

Site Contact: /

Telephone: /

Lab Contact:

Telephone:

COC No: 044780

2 of 2 COCs

For lab use only: Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No:

Analysis Turnaround Time (in BUS days)

TAT if different from below ______

☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day

Analyses: 7779

Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite=C / Grab=G	7779	Sample Specific Notes / Special Instructions:
R.I	9-5-12	0835		X									4		N	G	X	
OUTFALL 002 FB	↓	0855		X									2		↓	↓	X	
OUTFALL 002	↓	0900		X									4		↓	↓	X	
OUTFALL 002 Dup	↓	0905		X									4		↓	↓	X	
TRIP BLANK	—	—		X									2		—	—	X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For ______ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature] 9-5-12 / 1510			ATA/corn		9/5/12 1510
ATA/corn		9/5/12 1510			
			Received in Laboratory by: [signature]	TA	9-6-12 845

TAL 0018-1 (04/10)

Analytical Laboratory Request Form (ARF)

(1) Complete all yellow sections of this form. Move through by striking the "TAB" key.	
(2) Save the file & e-mail to:	labcustomer@duke-energy.com
Questions / Problems Call:	704-875-5245

Customer Information

Name	Office Phone	Cell Phone
Mike Wagner	513 651 3440	NA
Fax	**e-Mail Address**	
513 651 3462	mike.wagner@urs.com	

Accounting Fields

*** Only complete if specific charging to capital or other special projects is needed. Include field type and specific field entry. ***	Field Type	Specific Field

Sampling Information

Sampling Personnel / Contractor	Scheduled Sampling Date	Date Sample Kit Needed
URS Field Staff Geologist / URS	9/ 4-5 /2012	8/31/2012

Shipping Address for Kit

Name	Phone	Mail Code
Mike Wagner	513 651 3440	NA
Street Address - street address and town needed	**State**	**Zip Code**
525 Vine Street Suite 1800, Cincinnati, Ohio 45202	Ohio	45202

Reporting

Report Due Date	Additional Reports - .pdf file w/ Basic QC and EDD (spreadsheet) is Standard	
9/28/2012	Standard	
Report To (e-Mail Address 1)	**Report To (e-Mail Address 2)**	**Report to (e-Mail Address 3)**
mike.wagner@urs.com	tara.thomas@duke-energy.com	sue.wallace@duke-energy.com

Project Specifics

Project Name		Program Type
Miami Fort LL Hg 2012		NPDES Monitoring
Site, Location or Station	**State**	**Approximate Number of Days Sampling is Scheduled**
Miami Fort Station, Hamilton Co.	Ohio	2

Notes, Special Requests, Required Contract Lab to use, etc. **(LIMS Job Number-Duke Lab Provides)**

TestAmerica - North Canton, Ohio (contact - Denise Pohl) Note - Data report (prepared by URS) due to Miami Fort Station by end of month of sampling. September 2012 Event

S041

Bottles	Matrix	Variables, Methods
8 (four vial package)	water	(seven locations) LL Hg (collected by method 1669, analysis by Method 1631)
		(one location) Dissolved LL Hg (0.45 micron, filtered at laboratory)(collected by method 1669, analysis by Method 1631)
3 field blanks	water	LL Hg (collected by method 1669, analysis by Method 1631)
1 trip blank	water	LL Hg (Method 1631)
3	water	Total Hg (Method 7470A)

Jan 09

+ 4L DI water

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 14830

Client Duke Energy Site Name _____ By: _____

Cooler Received on 9-6-12 Opened on 9-6-12 (Signature)

FedEx: 1st (Grd) Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # 5041 Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water (None)

1. Cooler temperature upon receipt

IR GUN# 1	(CF 0°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 4G	(CF –1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	☐ Multiple on Back
IR GUN# 5G	(CF –1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 8	(CF 0°C)	Observed Sample Temp. 23.0 °C	Corrected Sample Temp. 23.0 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	Yes	(No)
12. Were air bubbles >6 mm in any VOA vials?	Yes	No (NA)
13. Was a trip blank present in the cooler(s)?	(Yes)	(No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
1705	<2	9-6-12	MS
1710	<2	"	"
1720	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-15837-1
Client Project/Site: Miami Fort LLHG Sept 2012 - J12100091

For:
Duke Energy Corporation
139 East Fourth Street
Cincinnati, Ohio 45202

Attn: Ms. Sue Wallace

Denise Pohl

Authorized for release by:
10/11/2012 5:11:04 PM

Denise Pohl
Project Manager II
denise.pohl@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-15837-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Duke Energy Corporation

Project: Miami Fort LLHG Sept 2012 - J12100091

Report Number: 240-15837-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 10/02/2012; the samples arrived in good condition. The temperature of the cooler at receipt was 20.1 C.

LOW LEVEL MERCURY

Samples TRIP BLANK (240-15837-1), 608 WWT FB (240-15837-2), 608 WWT (240-15837-3) and 608 WWT DUP (240-15837-4) were analyzed for Low Level Mercury in accordance with EPA Method 1631E. The samples were prepared on 10/08/2012 and analyzed on 10/10/2012.

Samples 608 WWT (240-15837-3)[10X] and 608 WWT DUP (240-15837-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the Low Level Mercury analyses.

All quality control parameters were within the acceptance limits.

Method Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	TAL NC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-15837-1	TRIP BLANK	Water	09/30/12 00:00	10/02/12 09:15
240-15837-2	608 WWT FB	Water	09/30/12 10:35	10/02/12 09:15
240-15837-3	608 WWT	Water	09/30/12 10:40	10/02/12 09:15
240-15837-4	608 WWT DUP	Water	09/30/12 10:45	10/02/12 09:15

Detection Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-15837-1

No Detections

Client Sample ID: 608 WWT FB — Lab Sample ID: 240-15837-2

No Detections

Client Sample ID: 608 WWT — Lab Sample ID: 240-15837-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	49		5.0		ng/L	10		1631E	Total/NA

Client Sample ID: 608 WWT DUP — Lab Sample ID: 240-15837-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Mercury	46		5.0		ng/L	10		1631E	Total/NA

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Client Sample ID: TRIP BLANK
Date Collected: 09/30/12 00:00
Date Received: 10/02/12 09:15

Lab Sample ID: 240-15837-1
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		10/08/12 13:00	10/10/12 16:53	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Client Sample ID: 608 WWT FB
Date Collected: 09/30/12 10:35
Date Received: 10/02/12 09:15

Lab Sample ID: 240-15837-2
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		10/08/12 13:00	10/10/12 17:02	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Client Sample ID: 608 WWT
Date Collected: 09/30/12 10:40
Date Received: 10/02/12 09:15

Lab Sample ID: 240-15837-3
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	49		5.0		ng/L		10/08/12 13:00	10/10/12 17:10	10

Client Sample Results

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Client Sample ID: 608 WWT DUP
Date Collected: 09/30/12 10:45
Date Received: 10/02/12 09:15

Lab Sample ID: 240-15837-4
Matrix: Water

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	46		5.0		ng/L		10/08/12 13:00	10/10/12 17:19	10

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 240-60546/1-A
Matrix: Water
Analysis Batch: 61020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 60546

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		10/08/12 13:00	10/10/12 13:14	1

Lab Sample ID: LCS 240-60546/2-A
Matrix: Water
Analysis Batch: 61020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 60546

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			5.00	5.59		ng/L		112	77 - 123		

QC Association Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Metals

Prep Batch: 60546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-15837-1	TRIP BLANK	Total/NA	Water	1631E	
240-15837-2	608 WWT FB	Total/NA	Water	1631E	
240-15837-3	608 WWT	Total/NA	Water	1631E	
240-15837-4	608 WWT DUP	Total/NA	Water	1631E	
LCS 240-60546/2-A	Lab Control Sample	Total/NA	Water	1631E	
MB 240-60546/1-A	Method Blank	Total/NA	Water	1631E	

Analysis Batch: 61020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-15837-1	TRIP BLANK	Total/NA	Water	1631E	60546
240-15837-2	608 WWT FB	Total/NA	Water	1631E	60546
240-15837-3	608 WWT	Total/NA	Water	1631E	60546
240-15837-4	608 WWT DUP	Total/NA	Water	1631E	60546
LCS 240-60546/2-A	Lab Control Sample	Total/NA	Water	1631E	60546
MB 240-60546/1-A	Method Blank	Total/NA	Water	1631E	60546

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-15837-1

Date Collected: 09/30/12 00:00 — **Matrix: Water**
Date Received: 10/02/12 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			60546	10/08/12 13:00	AS	TAL NC
Total/NA	Analysis	1631E		1	61020	10/10/12 16:53	AS	TAL NC

Client Sample ID: 608 WWT FB — Lab Sample ID: 240-15837-2

Date Collected: 09/30/12 10:35 — **Matrix: Water**
Date Received: 10/02/12 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			60546	10/08/12 13:00	AS	TAL NC
Total/NA	Analysis	1631E		1	61020	10/10/12 17:02	AS	TAL NC

Client Sample ID: 608 WWT — Lab Sample ID: 240-15837-3

Date Collected: 09/30/12 10:40 — **Matrix: Water**
Date Received: 10/02/12 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			60546	10/08/12 13:00	AS	TAL NC
Total/NA	Analysis	1631E		10	61020	10/10/12 17:10	AS	TAL NC

Client Sample ID: 608 WWT DUP — Lab Sample ID: 240-15837-4

Date Collected: 09/30/12 10:45 — **Matrix: Water**
Date Received: 10/02/12 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			60546	10/08/12 13:00	AS	TAL NC
Total/NA	Analysis	1631E		10	61020	10/10/12 17:19	AS	TAL NC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Duke Energy Corporation
Project/Site: Miami Fort LLHG Sept 2012 - J12100091

TestAmerica Job ID: 240-15837-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAC	9	01144CA	06-30-13
Connecticut	State Program	1	PH-0590	12-31-13
Florida	NELAC	4	E87225	06-30-13
Georgia	State Program	4	N/A	06-30-13
Illinois	NELAC	5	200004	07-31-13
Kansas	NELAC	7	E-10336	01-31-13
Kentucky	State Program	4	58	11-16-12
L-A-B	DoD ELAP		L2315	02-28-13
Minnesota	NELAC	5	039-999-348	12-31-12
Nevada	State Program	9	OH-000482008A	07-31-13
New Jersey	NELAC	2	OH001	06-30-13
New York	NELAC	2	10975	04-01-13
Ohio VAP	State Program	5	CL0024	01-19-14
Pennsylvania	NELAC	3	68-00340	08-31-13
Texas	NELAC	6		08-03-13
USDA	Federal		P330-11-00328	08-26-14
Virginia	NELAC	3	460175	09-14-13
Washington	State Program	10	C971	01-12-13
West Virginia DEP	State Program	3	210	12-31-12
Wisconsin	State Program	5	999518190	08-31-13

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: North Canton, OH

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Duke Energy	Client Project Manager: Mike Wagner (URS)	Site Contact: K. Pritchard	Lab Contact:	COC No:
Address: Miami Fort Station	Telephone: 513-651-3440	Telephone: SAME	Telephone:	1 of 1 COCs
City/State/Zip: North Bend, OH	Email: Mike.wagner@urs.com	Analysis Turnaround Time (CALENDAR DAYS or WORKING DAYS)	Analyses	
Phone: 513.651.3440	tammy.jett@duke-energy.com	TAT if different from below SAME: ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: LL Hg September 2012	Method of Shipment/Carrier: N/A			
Project Number: 14950516	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C)/Grab (G)	LL Hg	Sample Specific Notes / Special Instructions:
Trip Blank	—	—		X									2		N	—	X	
608 WWT FB	9-30-12	1035		X									2			G	X	
608 WWT	↓	1040		X									4				X	
608 WWT DUP	↓	1045		X									4		↓	↓	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

	Company	Date/Time		Company	Date/Time
Relinquished by:	URS	10-1-12 / 1215	Received by:	TestAmerica	10-1-12 / 1215
Relinquished by:	TestAmerica	10-1-12 / 13:25	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 10-2-12 915

TAL-0018 (1008)

10/11/2012

TestAmerica Canton Sample Receipt Form/Narrative Login # : 15837

Client Duke Site Name _____ By: _____ (Signature)

Cooler Received on 10-2-12 Opened on 10-2-12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF 0°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	☐ Multiple on Back
IR GUN# 4G	(CF –1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 5G	(CF –1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 8	(CF 0°C)	Observed Sample Temp. 20.1 °C	Corrected Sample Temp. 20.1 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Did all bottles arrive in good condition (Unbroken)?	Yes	No
7. Could all bottle labels be reconciled with the COC?	Yes	No
8. Were correct bottle(s) used for the test(s) indicated?	Yes	No
9. Sufficient quantity received to perform indicated analyses?	Yes	No
10. Were sample(s) at the correct pH upon receipt?	Yes	No NA
11. Were VOAs on the COC?	Yes	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
13. Was a trip blank present in the cooler(s)?	Yes	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

High temp OK

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in Sample Receiving to meet ~~recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809-~~ NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? ______________________________

Client ID	pH	Date	Initials

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant